

July 2012 – Number 67



# MENA Knowledge and Learning

## Quick Notes Series



### iMENA- LEARNING FROM THE INNOVATION POLICY EXPERIENCE IN EASTERN EUROPE, KOREA & TURKEY

Rimal Kacem <sup>1</sup>

Innovation is often touted as a key component in unleashing private sector growth and the dynamism necessary for solving the MENA region's employment challenges. The MENA region needs to generate 40 million jobs in 10 years to bring unemployment down to 4% - 6% from its 12% average over 1999-2008<sup>2</sup>. On the other hand, the development and implementation of innovation policy in MENA, is at a nascent, "start-up" stage. Thus, the World Bank's MENA finance and private sector development unit is speeding up its efforts to promote and support innovation policy reforms and projects and one of its first strategic activities is to look at lessons learnt in innovation reform from other countries who faced similar challenges. A cross regional three day conference was held from May 21-23, 2012 in Prague by the Middle East and North Africa region, the Europe and Central Asia (ECA) region, and the World Bank Institute, in cooperation with CzechInvest and the Korean Development Institute on the "How To of Innovation Policy: A Roadmap to Entrepreneurship." The conference was intended for participants from both regions to benefit from the hands-on experiences of European and other policy makers and private sector representatives in designing and implementing successful innovation policies, with a particular focus on linkages between innovation policies, job creation, entrepreneurship

and the role of universities for technology commercialization.

**MENA and ECA.** The conference sought to create an opportunity for MENA policy practitioners, academics and private sector representatives to learn from the Eastern European experience. Post transition economies grew in large part because of their innovation policies. Strengthening linkages between industry and academia, identifying priority areas in policy, and overcoming challenges in implementation and monitoring and evaluation were all components to a concerted effort towards innovation-driven growth.

In ECA the legacy of the previous system meant that innovation systems were characterized by; a) a lack of entrepreneurial spirit; b) universities and public research centers focused on basic research; and c) lack of collaboration and linkages among different actors of the national innovation system. Some key shifts in outlook included linking the science and technology sector closer to the market, and building linkages with other European Union (EU) countries as well as globally. The key role of foreign direct investment (FDI) in innovation systems in transition was also emphasized. Much progress has been achieved in Eastern Europe, but many challenges remain given that institutional change is a slow process.

**Why innovation matters:** Innovation drives increases in productivity and long-term economic growth, not only in developed nations but also in low-income countries. Firm productivity is the main explanatory variable for cross-country differences in economic performance, and productivity grows through innovation and technology enhancements. In addition, innovation can also meaningfully

<sup>1</sup> Rimal Kacem is a Junior Professional Associate in the Middle East and North Africa Financial and Private Sector Development Department. The Quick Note was cleared by Sector Manager Simon C. Bell.

<sup>2</sup> World Bank Middle East and North Africa Region, "Economic Development and Prospects: Enabling Economic Miracles" 2012. Pg. 20.

contribute to other social challenges which the private sector alone fails to address (including healthcare and sanitation, environmental sustainability, poverty alleviation, etc.)

Innovation is not limited to sophisticated scientific activities and high-tech firms operating in developed countries. The first line of action in developing contexts is to inculcate a broader view of innovation in the minds of policy makers, high level political leaders, the business community and the society at large. Public investment in innovation should extend to programs aimed at stimulating technology diffusion and enhancing the absorptive capacity of firms to adopt existing knowledge.

**Measuring returns to innovation:** Policy practitioners are increasingly concerned about the rationale, potential benefits and timeframes for the returns on public investment in R&D and innovation. Mobilizing and sustaining support for innovation policy requires evidence of short, medium and long term results. Measuring the direct and indirect results of public investment in R&D and innovation, however, is very complex and most of the returns are intangible and difficult to measure. Some of the results can be measured in the short-term but most will only become visible over the longer-term.

The challenge for national governments is to choose the right set of indicators to match a specific innovation strategy. Indicators and evaluation methods need to follow from an assessment of the main priorities. The expected returns should not be limited to the generation of new knowledge: other critical returns include job creation, training of researchers, developing new scientific infrastructure which may be used by firms, forming networks, or stimulating the creation of new firms (spin-offs).

**Innovation and Jobs- The Six Million Dollar Question:** Exploring the links between labor markets and innovation policy is particularly important to the MENA context. Innovation may increase jobs by diversifying the economy to new activities (not necessarily 'new to the world', but 'new to the country'). In MENA high quality jobs are more likely to come from services, stressing the 'transformative power of services innovation'. In contrast with industrial activities, services are not investment-intensive and the transformation from

knowledge to product is very fast. However, a medium-longer term strategy towards industry may be necessary from a developmental perspective.

While there is a lack of clear empirical evidence on the innovation-jobs causality, recent statistics show that in the US most job creation comes from companies less than 5 years old, and in EU countries the 10% fastest growing companies create around 60 to 80% of jobs.

- A study on France, Germany, Spain and the UK showed that in manufacturing, the contribution of new product sales to job creation over two years was around 6% and in the services sector it was around 7%.
- A recent survey on impact evaluation of various financing, training, and mentoring programs for MSMEs in Mexico showed these programs led to a 14% increase in value added and a 10% increase in employment.
- Several financing programs to support development of new products, processes, and technology acquisitions in Chile led to a 7% increase in employment levels and a 40% increase in sales.

**Education and skills:** Improving education and skills will allow for more efficient collaboration between universities and the business sector. Policy makers will need to find the best methodology to link market needs to curricula design, and decide how to promote these collaborations and where to focus. Policy makers can promote university-industry linkages by funding joint projects, developing infrastructure and services that facilitate collaboration (such as technology parks and incubation services) and by creating incentives for universities and firms to engage in collaboration. Universities are moving from 'ivory towers' towards 'entrepreneurial universities', although aligning incentive structures between academia and the private sector is challenging. Universities focus on research and dissemination while firms demand confidentiality. University researchers are not rewarded in their careers for collaborating with industries, and in some countries it is seen as unethical to do so.

*There are, however, a number of examples of improved industry to academia linkages MENA can learn from:*

- Turkey is introducing new academic promotion systems (which reward collaboration

with business and also start-ups) and a new system to evaluate universities through University Indexes that consider business collaboration.

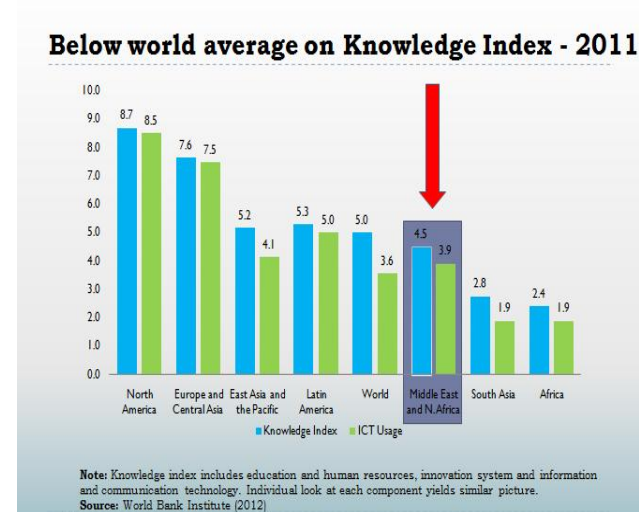
- Turkey and Croatia are emphasizing the development of stronger technology transfer offices to better commercialize research results, with a special focus on the licensing of patents.
- Linkages between foreign-owned multinational companies and local universities have increased substantially in recent years in Eastern Europe. Honeywell opened its first R&D center outside the US in 1993 in the Czech Republic, and the company is increasingly collaborating in R&D with Czech universities, starting with the sponsorship of training programs, and progressing towards joint R&D projects. Thus collaboration evolved from 'passive support' (funding) to 'active engagement' (joint lectures, joint R&D projects, participation in doctoral training, etc.)
- VM Ware is a multinational software firm with an R&D center in Bulgaria that promotes university industry linkages through internship programs in R&D and innovation projects, sponsoring conferences, and by sharing software and teaching university courses in cloud computing and virtualization.

In summary, most knowledge on innovation policy making remains 'tacit,' and so peer-to-peer exchange and learning is key as countries design innovation policies. There is, however, *no one size fits all solution* to innovation. Policies for governance structures, innovation finance and academia and industry linkages will need to be customized to the local context. Governance, innovation finance and a strong commitment to R&D are some of the key elements to a holistic approach to innovation policy.

**iMENA: the Road to Innovation and MENA.** The region's innovation strategy identifies the major development challenges including youth unemployment, low diversification of exports, low share of medium and high tech exports, and the need to move 'from privilege to competition'. The MENA region does not perform well on innovation and education indicators, and scores below the world average on the Knowledge Index (2011).<sup>3</sup> Putting in place efficient innovation ecosystems is

<sup>3</sup> The Knowledge Index includes education and human resources, innovation system and information and communication technology. World Bank Institute (2012)

essential. Innovation policies should first focus on improving the business environment, innovation finance, and skills. While developing the innovation policy framework, it will be important to leverage international linkages and to focus on promoting inclusive innovation.



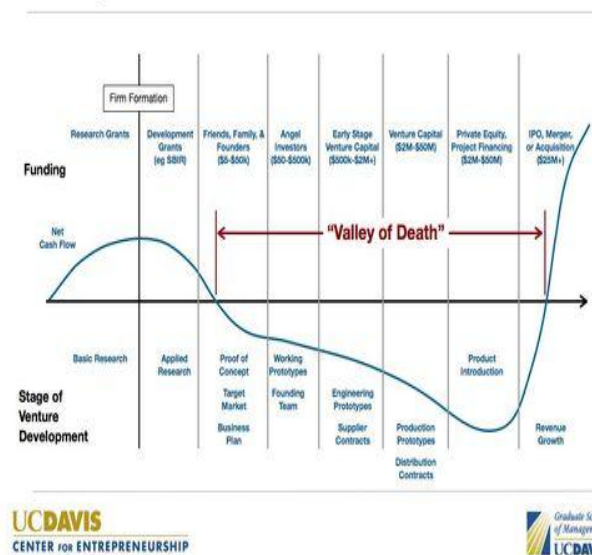
#### Country innovation strategy priorities in MENA:

- Representatives of Morocco and Lebanon presented their countries' new innovation strategies, and identified *improving the business environment* as the starting point, including improving the intellectual rights regime and addressing key bottlenecks such as telecoms, competition, infrastructure (especially electricity) and administrative reform.
- More specifically, a key priority in both Morocco and Lebanon is *promoting entrepreneurship through financing and support/training services*. The panelists agreed that the key market failure lies in funding at the *seed level*, on generating the concepts and ideas that lead to a start-up. One of the suggested interventions to promote seed funding is to increase the number of deals and "force the venture capital market to migrate" down the value chain to where there is less competition.
- Incorporating *demand-side innovation policies* has been overlooked by some governments in the past. Public procurement could serve as an important catalyst for innovation in areas like energy, defense, transport and IT.
- The value of *diaspora linkages* was also emphasized, with new initiatives such as the so-called 'Moroccan Innovation Club'.

- *Privilege* across MENA was a common constrained, with the private sector being viewed historically as a select group of people favored by the public sector (although the events of the Arab Spring have substantially changed that dynamic in some countries).

**Supporting Small and Medium Enterprises (SMEs) at the Very Early Stages:** Lebanon has launched a new initiative to promote entrepreneurship by facilitating access to seed and early stage equity finance through an SME and Innovation project designed with the World Bank. The dearth of seed funding was also emphasized by Usama Fayyad, CEO of Oasis500, the largest start-up incubator in Jordan, who referred to the problem as ‘*the early stage dessert challenge*’ (there is a lot of later stage venture capital but not at the seed stage). Oasis500 aims to train 4000 entrepreneurs and invest in 500 companies in 5 years. They provide training, mentorship, initial funding, and access to networks of business angels. So far demand for the company’s services and funds has been much higher than expected, and a large proportion of the firms (39%) being financed are managed by women. Other participants from the audience reported on new programs to promote start-ups and entrepreneurship in Egypt, Tunisia and Libya.

### Lifecycle of a venture



**Challenges Moving Forward in MENA:** MENA’s innovation policy agenda will be country specific and difficult to operationalize. While there are cross

regional constraints, innovation varies widely in MENA. Some countries are primarily constrained by seed funding (Tunisia, Lebanon, and WB&G) and others have significant sources of funding but lack local high skilled technical labor (GCC and Algeria). Overall, there are two overarching challenges for the MENA region: 1) The private sector is not well developed or supported by the public sector, so developing an innovation strategy is timely, but it is difficult to push for innovation given the large bottlenecks in the business environment. Innovation policy needs to be more clearly integrated into the broader private sector development agenda; 2) Fiscal constraints and the rising cost of finance in MENA following the Arab Spring means that it is necessary to search for cost-effective solutions to kick start and maintain support for innovation policy. Eastern Europe historically has received very strong financial support from EU structural funds, but funding for MENA will need to be further explored.

**World Bank Priority Activities in MENA:** The conference corroborated that the World Bank would need to target: 1) the lack of early stage funding for innovation and entrepreneurship as a significant constraint 2) supporting job-creating start-ups and gazelles (young high growth firms) given MENA’s employment generation problem, through funding and comprehensive technical assistance; 3) building closer university-industry linkages, both in education (to address skills mismatch) and in applied research (to ensure that R&D carried out by universities is relevant to industry); an 4) the creation of an interlinked Business Innovation Eco System which meets the developmental needs and innovation priorities of each particular country.

#### Contact MNA K&L:

Laura Tuck, Director, Strategy and Operations.  
MENA Region, The World Bank

Regional Quick Notes Team:  
Omer Karasapan, and Roby Fields  
Tel #: (202) 473 8177

*The MNA Quick Notes are intended to summarize lessons learned from MNA and other Bank Knowledge and Learning activities. The Notes do not necessarily reflect the views of the World Bank, its board or its member countries.*